



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/598,318

09/12/2006

Jens Schaefer

INA-51

2633

20311 7590 11/13/2008
LUCAS & MERCANTI, LLP
475 PARK AVENUE SOUTH
15TH FLOOR
NEW YORK, NY 10016

EXAMINER

CHANG, CHING

ART UNIT

PAPER NUMBER

3748

MAIL DATE

DELIVERY MODE

11/13/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/598,318	Applicant(s) SCHAEFER ET AL.	
	Examiner CHING CHANG	Art Unit 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/24/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the citizenship of each inventor properly. The country of citizenship for both inventors, Jens Schaefer and martin Steigerwald, should be -- Germany --, and the country of citizenship of inventor, Jonathan Heywood, should be -- United Kingdom --.

Claim Objections

2. Claims 1-20 are objected to because of the following informalities:
 - " Electric camshaft " in line 1 of claims 1-2 should be -- An electric camshaft --.
 - " Camshaft adjuster " in line 1 of claims 1-20 should be -- The camshaft adjuster --.

Appropriate corrections are required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-20 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

More specifically, " the spur gear " in line 12 of claims 1-2, " the first ring gear " in line 13 of claims 1-2, in claim 10, " the sleeve " in line 19 of claims 1-2, in claim 4, " the

Art Unit: 3748

latter " in claim 10, " the external ring ", and " the externaly toothed sleeve " in claim 16, and " the motor shaft of the BLDC motor " in claim 8 are lacking of antecedent basis, thus render the claimed subject matter in claims 1-20 indefinite.

Additionally, " preferably " in claims 7-8, 13, " such " in claims 1-2, and " any " in claims 18-19 render the claimed subject matter in claims 2, 2/3, 2/4, 2/5, 2/6, 7-8, 2/9, 2/10, 2/11, 2/12, and 18-19 indefinite.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. ***Claims 1, 3/1, 5/1, 6/1, 8/1, 10/1, 13/1, 14, 15, 16, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Heer (US Patent 6,328,006).***

Heer discloses an electric camshaft adjuster for adjusting and securing the phase angle of a camshaft (1; 201) of an internal combustion engine with respect to a crankshaft, comprising: a drive wheel (3) which is connected fixedly in terms of rotation to the crankshaft, an output component (18) which is fixed to the camshaft, and a

Art Unit: 3748

harmonic drive (19, 22; 6, 8; 206, 202) having at least one ring gear-spur gear pairing, one of the two components being connected fixedly in terms of rotation to the drive wheel, and the other component having at least a torque transmitting connection to the output component, the spur gear being embodied as a flexurally elastic sleeve and being arranged at least partially within a first ring gear, a wave generator (15, 16, 17) which is driven by an electric adjustment motor (2) by means of an adjustment shaft (14) which is fixed to the gearing, the wave generator has means for elliptically deforming the flexurally elastic sleeve, the said sleeve is deformed in a way that a torque-transmitting connection is formed between the ring gear and the sleeve at two points on the sleeve lying opposite one another, wherein at least one of the gears of the ring gear-spur gear pairing is formed in one piece with the drive wheel output component; wherein the said sleeve is of pot-shaped design; wherein the torque-transmitting connection between the ring gear and the said sleeve is implemented by means of an external toothing of the said sleeve which engages in an internal toothing of the ring gear, and the number of teeth of the internal toothing of the ring gear differs from the number of teeth of the external toothing of the sleeve; wherein the torque-transmitting connection between the ring gear and the sleeve is implemented in a frictionally locking fashion by means of the interaction of the smooth internal lateral face of the ring gear and the smooth external lateral face of the sleeve; wherein the motor shaft of the motor and the adjustment shaft have a connection by means of a rotationally fixed but radially movable; wherein a securing ring whose external diameter corresponds at least to the tooth head diameter of the first ring gear can be pressed into

Art Unit: 3748

the latter; wherein the means for elliptically deforming the flexurally elastic sleeve is a wave ring with an elliptical external circumference and an elliptically deformed roller bearing attached thereto; wherein the means for elliptically deforming the flexurally elastic sleeve is a wave ring with an elliptical external circumference and an elliptically deformed roller bearing attached thereto, and the external ring of the roller bearing and the externally toothed sleeve are embodied in one piece; wherein the elliptical wave ring and the internal ring of the roller bearing are embodied in one piece.

In addition, regarding the USC 102(b) rejection to claims 13-14, when a product by process claim is rejected over a prior art product such as that shown in Heer, which appears to be identical, although produced by a different process, the burden is upon the applicants to come forward with evidence establishing an unobvious difference between the two. See *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983).

8. *Claims 11/1, and 12/1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heer (as applied to claim 1 above) in view of design choice.*

The Applicant of this instant application has not disclosed that the specific material to make the components would provide an advantage, a particular purpose, or a solution to a stated problem.

Therefore, it would have been obvious to one having ordinary skill in the art as a matter of design choice, to select the lightweight material made components, as necessary.

9. *Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heer (as applied to claim 1 above) in view of Decristofaro et al. (US Patent 7,144,468).*

Herr discloses the invention, however, fails to disclose the electric adjustment motor being a brushless DC motor comprising a rare earth magnet.

The patent to Decristofaro on the other hand, teaches that it is conventional in the electric motor art, to have utilized a brushless DC motor (60, 62) comprising a rare earth magnet.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the brushless DC motor comprising a rare earth magnet, as taught by Decristofaro in the Heer device, since the use thereof would provide a more efficient electric camshaft adjuster.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHING CHANG whose telephone number is (571)272-4857. The examiner can normally be reached on M-Th, 7:00 AM -5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571)272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

Application/Control Number: 10/598,318

Page 7

Art Unit: 3748

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ching Chang/

Primary Examiner, Art Unit 3748